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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/807,871

03/24/2004

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STL919990184US3

5489

45729 7590 09/16/2009

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EXAMINER

NGUYEN, CINDY

ART UNIT

PAPER NUMBER

2161

MAIL DATE

DELIVERY MODE

09/16/2009

PAPER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DAVID E. SIMMEN

Appeal 2009-001448
Application 10/807,871
Technology Center 2100

Decided: September 16, 2009

Before HOWARD B. BLANKENSHIP, THU A. DANG, and JAMES R.
HUGHES, *Administrative Patent Judges*.

DANG, *Administrative Patent Judge*.

DECISION ON APPEAL

I. STATEMENT OF THE CASE

Appellant appeals from the Examiner's final rejection of claims 1-33 under 35 U.S.C. § 134(a) (2002). We have jurisdiction under 35 U.S.C. § 6(b)(2002).

We reverse.

A. INVENTION

According to Appellant, the invention relates generally to database management systems performed by computers and, in particular, to a query optimization technique for obtaining improved cardinality estimates using statistics on pre-defined queries (Spec. 1, ll. 28-30).

B. ILLUSTRATIVE CLAIM

Claim 1 is exemplary and is reproduced below:

1. A method of optimizing execution of a query that accesses data stored on a data store connected to a computer, comprising:

using statistics on one or more expressions of one or more pre-defined queries to determine an optimal query execution plan for the query; and

executing the optimal query execution plan for the query in order to access the data stored on the data store connected to a computer and then output the accessed data.

C. REJECTIONS

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Zaharioudakis	2003/0088558 A1	May 8, 2003 (filed on Nov. 5, 2002)
Bello	6,496,819 B1	Dec. 17, 2002 (filed on Dec. 28, 1998)

Claims 1-33 stand provisionally rejected on the ground of nonstatutory double patenting over claims 1 and 3-30 of copending Application No. 09/669,556.¹

Claims 1-5, 12-16, and 23-27 stand rejected under 35 U.S.C. § 102(e) as anticipated by the teachings of Zaharioudakis².

Claims 6-11, 17-22, and 28-33 stand rejected under 35 U.S.C. § 103(a) over the teachings of Zaharioudakis in view of Bello.

II. ISSUE

Has Appellant shown that the Examiner erred in finding that the Zaharioudakis teaches “using statistics on one or more expressions of one or more pre-defined queries to determine an optimal query execution plan for the query” (claim 1)? In particular, the issue turns on whether Zaharioudakis teaches using statistics on one or more expressions of one or more pre-defined queries.

¹ Though the Examiner indicates that claim 1-33 are rejected on the ground of nonstatutory double patenting, upon inspection of the image file of the subject application, it appears that a Terminal Disclaimer has been filed and accepted by the Office on May 11, 2007. Accordingly, we will not address the double patenting rejection on appeal.

² Though the Examiner lists claim 17 and 28 as rejected under 35 USC 102(e), claims 17 and 28 were not addressed by the Examiner in the 35 USC 102(e) rejection. Rather the Examiner addressed the claims in the 35 USC 103(a) rejection. Thus, the listing of claims 17 and 28 under 35 USC 102(e) appears to be in error by the Examiner, and we will treat claims 17 and 28 as rejected under 35 USC 103(a).

III. FINDINGS OF FACT

The following Findings of Fact (FF) are shown by a preponderance of the evidence.

Zaharioudakis

1. Zaharioudakis discloses a Systems Services module which controls the execution environment, including managing log data sets, gathering statistics, handling startup and shutdown, and providing management support (p. 2, ¶ [0033]; Fig. 1).
2. An optimization function transforms or optimizes an SQL query, whereby an application plan is generated from compiled or interpreted SQL statements (pp. 2-3, ¶ [0039]; Fig. 2).
3. The optimize and bind step considers both the available access paths (indexes, sequential reads, etc.) and system held statistics on the data to be accessed (the size of the table, the number of distinct values in a particular column, etc.) to choose what it considers to be the most efficient access path for the query (p. 3, ¶ [0041]; Fig. 3).

IV. PRINCIPLES OF LAW

35 U.S.C. § 102

In rejecting claims under 35 U.S.C. § 102, “[a] single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation.” *Perricone v. Medicis Pharm. Corp.*, 432 F.3d 1368, 1375 (Fed. Cir. 2005) (citation omitted).

“Anticipation of a patent claim requires a finding that the claim at issue ‘reads on’ a prior art reference.” *Atlas Powder Co. v. IRECO, Inc.*, 190 F.3d 1342, 1346 (Fed Cir. 1999) “In other words, if granting patent protection on the disputed claim would allow the patentee to exclude the public from practicing the prior art, then that claim is anticipated, regardless of whether it also covers subject matter not in the prior art.” (*Id.*) (citations omitted).

“A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631 (Fed. Cir. 1987).

V. ANALYSIS

Claims 1-5, 12-16, and 23-27

Zaharioudakis discloses gathering statistics (FF 1), and optimizing an SQL query, whereby an application plan is generated from compiled or interpreted SQL statements (FF 2). We find an artisan would have understood Zaharioudakis to teach using statistics to determine an optimal query execution plan for the query.

However, Appellant contends that there is no discussion in Zaharioudakis of “using statistics on expressions of pre-defined queries to determine an optimal query execution plan” (App. Br. 9). In particular, Appellant argues that “the only statistics are described in paragraph [0041]

of Zaharioudakis and merely comprise the size of the table and the number of distinct values in a particular column” (*Id.*).

The Examiner maintains that Zaharioudakis discloses such step of using statistics “to determine an optimal query plan for the query,” as required by claim 1 (Ans. 10-12). Accordingly, the issue we address on appeal is whether Zaharioudakis teaches “using statistics on one or more expressions of one or more pre-defined queries to determine an optimal query execution plan for the query” (claim 1). In particular, we address whether Zaharioudakis teaches using statistics on one or more expressions of one or more pre-defined queries.

After reviewing the record on appeal, we agree with Appellant that the passages cited by the Examiner do not teach the claimed step of “using statistics on one or more expressions of one or more pre-defined queries” of claim 1.

Zaharioudakis discloses using statistics on the data to be accessed (the size of the table, the number of distinct values in a particular column, etc.) to choose what it considers to be the most efficient access path for the query (FF 3). As Appellant contends, the statistics described in Zaharioudakis “merely comprise the size of the table and the number of distinct values in a particular column” (App. Br. 9).

Though the Examiner finds that Zaharioudakis discloses such step of using statistics (Ans. 10-12) and we find that Zaharioudakis teaches using statistics to determine an optimal query execution plan for the query (FF 1-

2), we agree with Appellant that there is no discussion in Zaharioudakis of “using statistics *on expressions of pre-defined queries* to determine an optimal query execution plan” (App. Br. 9; Board’s emphasis).

As such, we will reverse the rejection of representative claim 1 and claims 2-5, 12-16, and 23-27 standing therewith as anticipated by Zaharioudakis. We thus conclude that Appellant has shown that the Examiner erred in rejecting claims 1-5, 12-16, and 23-27 under 35 U.S.C. § 102(e) for the reasons as set forth above.

We note that Appellant also contends that Zaharioudakis is not a prior art reference (App. Br. 4-8). However, in view of our conclusion that Zaharioudakis does not anticipate the claimed invention, we do not address the merit of this contention.

Claims 6-11, 17-22, and 28-33

We also find that the cited passages in Bello do not cure the deficiencies of the passages in Zaharioudakis cited by the Examiner. As such, we will reverse the rejection of 6-11, 17-22, and 28-33 over Zaharioudakis in view of Bello.

VII. CONCLUSIONS OF LAW

Appellant has shown that the Examiner erred in finding claims 1-5, 12-16, and 23-27 anticipated under 35 U.S.C. § 102(e) over the teachings of Zaharioudakis; and finding claims 6-11, 17-22, and 28-33 unpatentable

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under 35 U.S.C. § 103(a) over the teachings of Zaharioudakis in view of Bello.

VIII. DECISION

We have not sustained the Examiner's rejection with respect to any claim on appeal. Therefore, the Examiner's decision rejecting claims 1-33 is reversed.

REVERSED

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